PROJECT CHARGE: 1703

PROJECT TITLE: CIGARETTE MAKING TECHNOLOGY

PROJECT LEADER: A. Robinson

PERIOD COVERED: February 1 - 28, 1983

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ADHESIVES TECHNOLOGY (A. Robinson and V. P. Henderson)

Adhesives development-formulation program

Commercially available adhesive base-emulsions formulated with varying amounts of selected compatible plasticizers were examined for their thermal and adhesive-paper interactions property behavior characteristics.

Work is continuing to determine these property characteristics in similarly prepared adhesive systems incorporated with different amounts and/or kind of boration and the degree of hydrolysis of the poly(vinyl alcohol) used as the emulsion-particles colloidal protective agent.

ADHESIVES SCREENING TEST (T. E. Majewski, T. V. Van Auken and A. Robinson)

Development of viable incoming adhesives screening tools

Data supplied by the Kimberly-Clark Corporation from their evaluation of the Werle Tack Tester as a screening tool was analyzed. The data show that some production tipping-adhesives respond differently to different sides of unconverted tipping papers, while other tipping-adhesives are virtually insensitive to the side of the tipping paper to which they are applied[1,2].

Plans are to further evaluate the viability of the Werle Tack Tester by studying the results for a greater cross-section of adhesive-paper combinations.

Initial experiments exploring the adaptability of our mechanical testing instrument as a tack test for adhesives were performed.

Initial indications are with some modifications the instrument is adaptable.

ADHESIVES PROPERTY STUDIES (T. E. Majewski, T. V. Van Auken, A. Robinson and V. P. Henderson)

Development of adhesive properties-performance relationship data that will enable PM to specify to adhesive vendors those adhesive properties which are required to achieve optimum adhesives performance efficiency.

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Data from adhesive surface behavior studies are being analyzed with respect to adhesive emulsions tensile strength and elasticity.

Initial results suggest this kind of analysis provides insight into how efficiently adhesives with certain property characteristics can be applied during roll-application of adhesives operations.

Adhesive mixtures continue to be examined rheologically as a function of amount and/or kind of components (e.g., plasticizers, surfactants, etc.).

Studies on the testing of adhesives bond quality and strength continue on a variety of paper substrates as a function of adhesives rheology and ingredients.

REFERENCES

1) T. V. Van Auken, letter to Art Aronoff, Kimberly-Clark Corp., February 14, 1983.

2) T. V. Van Auken, Evaluation of Werle Tack Tester - trip to Kimberly-Clark (Schweitzer) in Roswell, Georgia, memo to A. Robinson, February 9, 1983.

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